

ABSTRACT OF THE DISCLOSURE

In a lean-burn engine equipped, in the exhaust pipe, with NOx trap catalyst that collects NOx by absorption or occlusion, the rich spike start timing
5 and rich spike volume are optimized.

The above subject is achieved by an engine control system equipped, in the downstream side of the NOx trap catalyst, with a NOx sensor that detects the NOx component in the exhaust, NOx trap catalyst model, and
10 a device that controls the engine operating condition based on the outputs of the NOx trap catalyst model and NOx sensor.